CLAIMS

1. A device for canceling interference comprising:

likelihood calculation means for calculating

5   likelihood of each symbol included in a reception signal;

ranking decision means for deciding or updating a

ranking of said each symbol, based on calculated

likelihood;

control means for controlling updating operation

10 of said ranking decision means;

demodulation means for demodulating a symbol with

the highest position in the ranking; and

cancellation means for canceling the modulated

symbol from the reception signal.

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2. A device for canceling interference according to claim

1, wherein after the first decision of the ranking by

said ranking decision means, said control means makes

said ranking decision means decide the previously

20 decided ranking as a new ranking, when a likelihood of

a symbol cancelled by a cancellation means is greater

than a first threshold; and makes said ranking decision

means update the ranking, when the likelihood of the

symbol cancelled by said cancellation means is equal to

25 or lower than the first threshold.

3. A device for canceling interference according claim

1, wherein said control means makes said ranking decision means decide the previously decided or updated ranking as a new ranking, when a likelihood of a symbol cancelled by said cancellation means is equal to or lower than a

5   second threshold.

4. A communication terminal apparatus comprising a device for canceling interference, said device for canceling interference comprising:

10   likelihood calculation means for calculating likelihood of each symbol included in a reception signal;

ranking decision means for deciding or updating a ranking of said each symbol, based on calculated likelihood;

15   control means for controlling updating operation of said ranking decision means;

demodulation means for demodulating a symbol with the highest position in the ranking; and

cancellation means for canceling the modulated

20   symbol from the reception signal.

5. A base station apparatus performing wireless communication with a communication terminal apparatus comprising a device for canceling interference, said

25   device for canceling interference comprises:

likelihood calculation means for calculating likelihood of each symbol included in a reception signal;

ranking decision means for deciding or updating a ranking of said each symbol, based on calculated likelihood;

control means for controlling updating operation
5   of said ranking decision means;

demodulation means for demodulating a symbol with the highest position in the ranking; and

cancellation means for canceling the modulated symbol from the reception signal.
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6. A base station apparatus comprising a device for canceling interference, said device for canceling interference comprising:

likelihood calculation means for calculating
15   likelihood of each symbol included in a reception signal;

ranking decision means for deciding or updating a ranking of said each symbol, based on calculated likelihood;

control means for controlling updating operation
20   of said ranking decision means;

demodulation means for demodulating a symbol with the highest position in the ranking; and

cancellation means for canceling the modulated symbol from the reception signal.
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7. A communication terminal apparatus performing wireless communication with a base station apparatus

comprising a device for canceling interference, said device for canceling interference comprises:

likelihood calculation means for calculating likelihood of each symbol included in a reception signal;

5 ranking decision means for deciding or updating a ranking of said each symbol, based on calculated likelihood;

control means for controlling updating operation of said ranking decision means;

10 demodulation means for demodulating a symbol with the highest position in the ranking; and

cancellation means for canceling the modulated symbol from the reception signal.

15 8. A method for canceling interference comprising:

likelihood calculation step for calculating likelihood of each symbol included in a reception signal;

ranking decision step for deciding or updating a ranking of said each symbol, based on calculated

20 likelihood;

control step for controlling updating operation of said ranking decision step;

demodulation step for demodulating a symbol with the highest position in the ranking; and

25 cancellation step for canceling the modulated symbol from the reception signal.